https://doi.org/10.26740/vt.v8n2.p137-153

Band Milestones as Strategy for Mapping Students' Musical Progress in GJKI Bandung Raya

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Article info:
Received:
10 November 2025
Reviewed:
15 December 2025
Accepted:
13 January 2026

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Abstract: This study examines students' musical development in a church-based band learning environment using a milestone framework to map technical, musical, and collaborative progress. Ten students from GJKI Bandung Raya participated in rehearsals involving instrument-specific training, group coaching, and arrangement work. Data were collected through observation, interviews, and documentation, then analysed using thematic procedures and Miles and Huberman's analytic stages. Findings indicate that students demonstrated measurable growth in tempo stability, harmonic understanding, dynamic control, cue responsiveness, and role clarity. Collaborative progress was also evident, particularly in rhythmic coordination, structural navigation, and real-time problem solving during rehearsals. Challenges such as mid-song tempo instability, dynamic imbalance, and vocal inaccuracy required adaptive instructional adjustments that supported sustained improvement. The milestone approach proved effective for identifying learning indicators in community-based band settings. The study contributes practical and theoretical insights and suggests future development of structured milestone-based band curricula.

Keywords: Band learning, collaborative musicianship, community music, milestone strategy.

1. INTRODUCTION

Practicing music with a band integrates a variety of technical, musical, and social competencies. Band-based learning requires a deeper level of synchronization and attention to each band member's contribution compared to individual instruction (Jacoby et al., 2015; Moura et al., 2024; Wood et al., 2022). Students use collaboration to foster their musical comprehension in a band setting (Holochwost et al., 2021; Jiang & Tong, 2025). Schiavio et al (2021) add that such collective engagements in music learning can further improve the musical commitment and interest of the students.

Regardless of the advantages, students' progress in band settings can be difficult to assess. Several studies point to challenges in assessing individual progress in band instruction. Ilari (2020) points out that musical progress is incremental and is difficult to track without it being some sort of organized observation that records significant metrics. Laidlaw (2021) points out that the outcome goals of band instruction tend to overshoot and have ramifications on the degree to which the individual processes of learning are acknowledged.

'Band Milestones' is a term that describes points in time that represent a student's growth in music and is an extremely helpful way to chart progress (Blaschke & Marin, 2020; Okorie & Uzoaru, 2021). These milestones include, but are not limited to, changes in

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technique, musicality, coordination, and collaborative skills. Any study of a process must go beyond a singular focus on the end goals. This is particularly true in areas of study which are as complex as music learning and development is (Sembiring, Maulana, Nurfalah, et al., 2025). López-Íñiguez & McPherson (2020) draws attention to the changes of one's practice, strategies of learning, and the engagement in music performance that must happen in order to facilitate musical development.

Scholarship on band learning has studied the ways in which group participation in music making enhances social integration, promotes social engagement, and deepens collaborative musicianship and identity development (Blasco-Magraner et al., 2021; Sembiring et al., 2025). But, international literature has mostly focused on the educational formal arrangements. Du & Leung (2022) note the community music, including faith-based communities, has particular and distinctive forms of learning which have not been studied.

Some gaps are present in the literature in question. For example, there are some studies which examine the phenomenon of musical development in church-based band settings, despite the fact that these communities are integral to the younger cohorts' engagement with music (Hyde & Joseph, 2022). Furthermore, band milestones as frameworks for understanding musical development in community bands have not been used extensively. Additionally, scholarly work from Indonesia shows minimal interest in church bands as organized settings for development (Harahap & Simon, 2022). To conclude, several predecessors have mapped musical development with indicators of the process which pertain to learning in church-based bands.

This research contributes to scholarship on band learning by situating band milestones as tools for monitoring student progress musically at GJKI Bandung Raya. This setting is particularly relevant due to the active youth music ministry, the varying levels of students, and the absence of a formalized developmental structure for learning band instrumentals. Focusing on this specific context propels discussions on band milestones, progress in learning music, pedagogy of bands, and learning within community music.

This study aims to track students' musical development through the attainment of specific milestones in band learning at GJKI Bandung Raya. More specifically, the study intends to trace the definable points of progress, elaborate the associated social and musical interrelationships, and provide suggestions that could enhance the intentionality of learning in church-related band contexts.

2. METHODS

To examine students' musical growth in a church-based band learning environment, the church-based band learning environment, the church-based band learning environment, the church-based band learning environment and the band as a whole, the researchers decided to use a musical learning environment within a church to better facilitate the research in in the context of the church environment. As a church-based band environment, research in the context of a church-based band environment allows for a community-based qualitative research design within the context of a church-based band (Creswell & Creswell, 2022; Huyler & McGill, 2019; Usman et al., 2024). As a church community, the research was conducted in Gereja Jemaat

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Kristus Indonesia (GJKI) Bandung Raya, a faith community in Bandung Raya with a youth music ministry.

Of the students who participated in the band training sessions at the church, 10 students from the church participated in the band, students from the church and students from the church volunteers were selected. These students were selected because of their band training sessions at the church. The band training sessions were two hours in length and focused on the learning of one particle helps with the observation of the learning interface and provides a venue for the participants to demonstrate their musical, technical and social behaviours. The students were able to demonstrate their skills.

The methods used to collect the data included observations, documentation, and semi-structured interviews. During the observations, the students learned behaviours, interactions, coordination, and musical activities were documented. These interviews were also documented to garner students' perspectives to gain insights into their musical progress and challenges. There were also documented notes of the rehearsals written and recordings of rehearsals both audio and visual, which helped to verify the data from the observations and interviews.

Thematic analysis and analytic procedures were used to conduct the data analysis. Thematic analysis, which identifies areas of interest, and developmental markers, hotpots within the data, were identified and followed through to create the findings (Naeem et al., 2023; Sembiring et al., 2025). Then, to complete the findings, the data were refined through the lenses circulating the stages of data reduction, data display, and conclusion verification Miles et al (2018) in a way to facilitate students' musical development.

To establish credibility, data were triangulated. Documented procedures of the research enhanced dependability. Confirmability was sustained by the fact that the interpretations of the data were provided. Detailed illustrations of the research setting and participants enriched the study's transferability (Baldock & Murphrey, 2020).

3. RESULTS AND DISCUSSION

3.1 Results

Students' Technical and Music Skill Development

Over the instruments, students showed differing levels of achievement; some students had their learning clearly mapped in stages that matched alignment with the framework of the band's practice sessions. The drummer had already acquired his first level of expertise with simple beats and fills, so he was ready to begin more challenging tasks with his instructor. Training then focused on more complex beats, sequenced fills that required more control, and basic linear fills. Through imitation and demonstration, the drummer worked on more consistent and stable rhythmic coordination with the bassist, showing the influence of consistent practice on the control of musical precision (Altenmüller et al., 2020; Bremmer & Nijs, 2020). The drummer sent clear goals that were set across practices. Some goals were: to maintain a consistent tempo, to have accurate sequence control of the fills, and to develop more consistent syncopation with the bassist.

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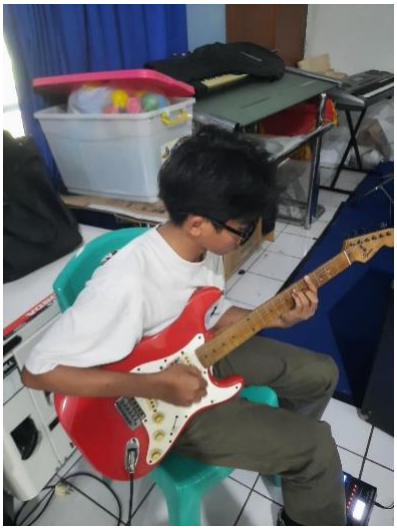

Figure 1. Students playing the guitar while using guitar effects and improvising

The guitarist also worked through a few stage developments. Working with open chords, basic rhythms, and tone shaping, the guitarist moved on to the use of barre chords, smoother changes, and the playing of add on short melodies to fill out an arrangement. In a guide on the side approach, the instructor demonstrated, critiqued, and invited the student to polishing to set where the student would play and practice in a focused way (Sembiring et al., 2024). After a time, the guitarist showed the following milestones. The changes were smooth, and consistent use of barres within a progression, and simple melodies that were placed and appropriate to the arrangement.

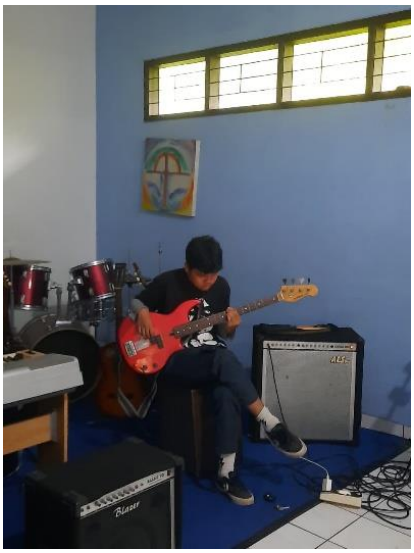

Figure 2. Students who play bass using simple scales as variations in song transitions

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Because the bassist played guitar prior and already had some basic understanding of music, they were able to start with exercises focused on root-note grooves, basic rhythmic patterns, and minor pentatonic scale and major scale fragments like *do-re-mi* and 1-2-3-5-6 patterns. Playing with the drummer helped to tighten the groove as the students were able to experience the notion that one learns rhythm through interconnection and use of musical cues (Müller & Lindenberger, 2022; Setzler & Goldstone, 2020). Some early goals were to maintain a steady groove throughout the section, use scale-based fills, and lock in with the drummer on the off beat during the rhythmic transitions.

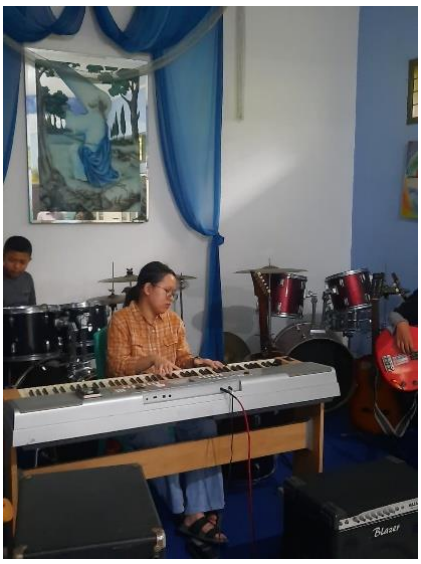

Figure 3. Keyboard practice using chord variations and inversions

Keyboard scholars were taught basic skills like hand location, note letter recognition, and beginning inversion comprehension. The teaching fallout was arpeggiated sequences, supportive voicing, and register changes that contour the harmonic structure of the arrangement. Sessions built on demonstrations bridged the gap between theory and practice, reinforcing theory that harmonic fluency is acquired with performance. The keyboard milestones included complex voicing of the band arrangement, rhythmic arpeggiation, and consistent dynamic control within the ensemble.

Figure 4. Three students practicing parts of a song together

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Vocal training was centered on breath control, maintaining one tone while singing, enunciation, and ability to project sound in a choir. Students rehearsed more lengthy singing passages, including various levels of volume and control to manage emotive expression in singing in conjunction with tension and relaxation of breathing. Excerpts of a song were varied by one to five notes in order to foster a greater range of artistry and creativity of the voice, tied to the research that supports the importance of improvisational expression and creativity (Pousson et al., 2021; Sayers, 2025). The goals of the choir members crystallized with threads notated of keeping a consistent pitch along with lengthened patterns, varied control of volume in the different parts of the song, and improvisational singing that was simple during the pauses in the melody that was structured.

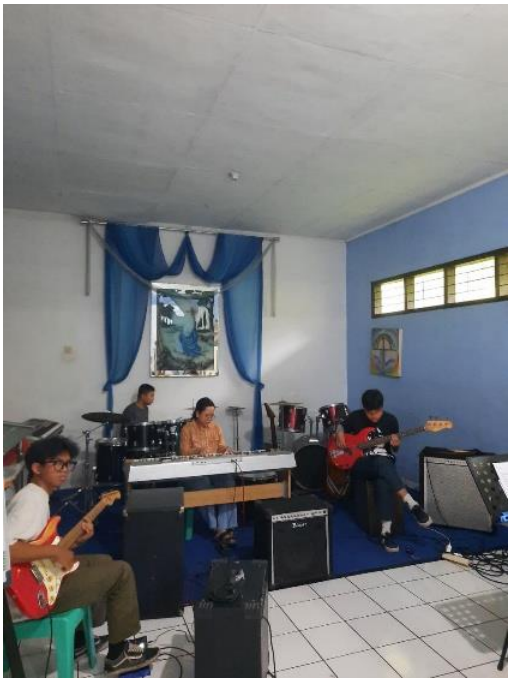

Figure 5. Documentation of all band practice activities at GJKI Bandung Raya

Besides gaining competencies independently during guided instruction, students worked together as a group to reform and rearrange simple Christmas songs and worship music into still simple but new band arrangements. Students in this stage arrange the songs to identify some specific formal structures, those structures being assigning different instrumental roles and polishing the harmonic structures to use extended chords such as the major 7th, minor 7th, minor 11th, and added tone chords as well as shaping transitions. During sectional rehearsals each group got to isolate their specific part, noting the problem transitions, before joining together in a full band rehearsal.

Finally, in full rehearsal students addressed overall balance of the pieces, shaping of the different dynamics, and transitions within the songs to work as one cohesive unit. The instructor managed these full rehearsals, shaping and guiding the process with the use of proxy, demonstration, and modelling to keep the students together as one unit. The students' technical and musical improvements in balance, dynamics, transitions, and overall as a group were evident. They were able to improve with each rehearsal over a closure of the instructional cycle and gain musical and

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technical milestones in their arrangements, and actually, measurable improvements to their technical playing, music, and their coordination and work as one unit were made.

Table 1. Milestones in band learning and the related instructional goals

Instrument	Target Milestones	Achievement Indicators
Drum	Steady tempo and tight rhythmic sync	Consistent timing, precise fills, and clear rhythmic alignment with the bassist
Guitar	Clean transitions, solid barre chords, and concise melodies	Clean changes, steady use of barre shapes, and supportive melodic lines
Bass	Steady groove, basic scale fills, and good sync with the drums	Steady groove, clean fills, and good rhythmic cohesion
Keyboard	Clear supporting voicings, steady arpeggios, and consistent register control	Clean voicings, consistent arpeggios, and good dynamic balance
Vocal	Consistent intonation, steady breath control, and basic improvisation	Accurate pitch, controlled dynamics, and brief improvised lines

Collaborative and Interactional Milestones in Band Practice

The student's ability to Voicing chords, signal musically, understand their parts, and collaborate in shaping song arrangements got even better in conjunction with the student's ability to synchronize and collaborate in shaping song arrangements. In the first rehearsals, the drummer and bass player had difficulties in playing at the same tempo and keeping in time with the sets of music. In time, however, they learned better.

The guitarist and keyboard player were also better in keeping in time with the main rhythm, especially at points of shift in the music and changes of loudness. This progress was also a big deal because the members of the group got even better in keeping in time with each other and the sound was more matched and arranged together.

The communication of participants grew musical in nature through the course of the rehearsal. Students learned to not only respond to the instructor's cues but also to the signals of the vocalist to shape the form of the pieces. The vocalist used simple one-finger cues, where one finger meant 'go back to the verse', two meant 'go to the chorus', and a three-shaped signal with the index finger and thumb meant the end or 'coda' of the song. These cues allowed the group to maintain their form in a consistent manner during their performance of 'Silent Night' where the vocalist would signal the end of the piece with a three-shaped signal while singing the line "sleep in heavenly peace" three times in a row. Gradually most of the players who were at first very slow to respond to the cues became more and more accurate in their responses. This was a significant development as it demonstrated a greater degree of real-time coordination through the recognition of cues flowing through the system, as demonstrated in the illustrations below.

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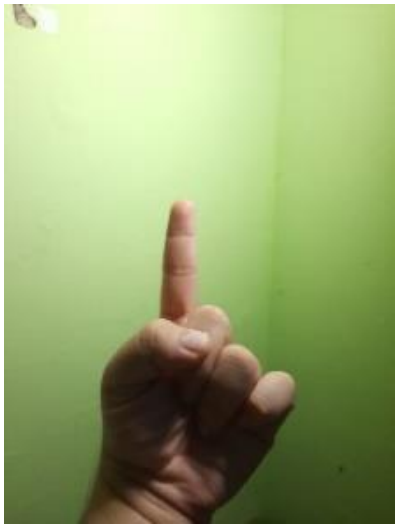

Figure 6. This finger sign refers back to the verse section of the song

Figure 7. This finger sign indicates the chorus section of the song

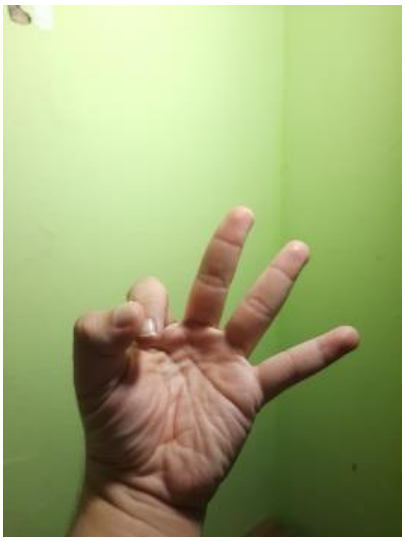

Figure 8. This finger sign indicates the end of the song lyrics, which are repeated three times

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Figure 9. This finger signifies silence or quiet

The management of both balance and dynamics improved overall as well. At first, some instruments like the guitar and drums overshadowed the others. Having the instructor balance the mix and walk the room, the students learned to control the volume, dynamics, and texture of the mix to make room for the other instruments. The keyboard part became more of a harmonic support, the bassist kept a steady, rhythmic groove, and the guitarist changed their tone and texture to a more balanced volume. These changes marked a milestone as there was a greater collective consciousness of their dynamic balance and the overall texture of the ensemble.

This progression of students' understanding of their individual roles as musicians of the band was a result of clearer role distribution within the ensemble. Students progressed to understanding that their instruments each have a unique contribution. The drummer kept the groove, the bassist provided a rhythmic and harmonic structure, the guitarist added light rhythmic and melodic fragments, the keyboardist expanded the harmony, and the singer led the melody. While role overlapping was a common occurrence in the earlier run-throughs, students' practice and contemplation of their individual functions culminated in a point marked by more consistent role responsibility.

There was a clear increase in collaboration during the song arrangements. The students coordinated and negotiated the arrangement's form, wrote out and planned the dynamics, distributed the instrumentation, and chose the chords. Those in the group formally divided the work and during the planning of the arrangement, briefly discussed who would plan the introduction, the placement of the chorus, and the transitions and other movements in and out of the harmony. As students worked in these groups, they became increasingly willing and inspired to share ideas and to respond to the suggestions of others in the group, resulting in arrangements which were completer and more stable. A clear sign of progress was the ensemble's ability, as a result of these collective arrangements, to construct simple but effective and musically stable arrangements.

There was also a clear increase in progress in group problem solving. In the middle of a performance, if there were problems with the rhythm, an imbalance of dynamics, or if there were chords that

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were supposed to change but were skipped, students wouldn't stop and just give up. Instead, they would work quasi-autonomously to fix the problem by actively retaining their attention to the song and figuring out where they were supposed to be under the surface of the music. Over the course of the performance, students were able to self-regulate and pace the song in order to keep the performance uninterrupted and cohesive. This was a clear sign of progress, as students were able to fix mistakes by working together to preserve the flow of the song.

Aside from that, the group started showing interaction confidence. More confidence was shown by the vocalists to phrase and improvise lightly, and the keyboard player and guitarist more flexibly adjusted to each other on their parts. The rhythmic pillars, the drummer and bassist, became more united to maintain the groove. A more conducive environment to collaboration was evident by the players to work groove and interactivity. A more overarching milestone; the group was more comfortable to each other, was trusting, and were more cohesive and musical on their parts. Band rehearsals, during this period, showcased the collaborative development and growth of the ensemble and participants, by creating a more collective outlet, for they demonstrated a more controlled ensemble, improved cue responsiveness, and a collective shaping of the dynamics and performance of the outcome.

Challenges and Learning Adjustments Shaping Musical Progress

Rehearsals in GJKI Bandung Raya's band programs involved multiple complexities that shaped the students' musicianship and adapted the changes in learning throughout the cycle. Such complexities and the methods employed to tackle them shaped the milestones in the technical, collaborative and interpretive advancements to be rather explicit. One complexity was the unique technical experiences of the students. Some players, like the drummer, had more solid fundamentals, while others, especially on guitar and keyboard, needed more primary techniques to be strengthened. This difference sometimes affected the cohesion in the initial ensemble rehearsal. To counter this, the teacher gave differentiated instructions. Students that needed more attention to mastery of the skills were asked to core skills that needed attention repeatedly, while students that had more solid fundamentals were given more advanced material to master. This change of instruction helped the group's ensemble rehearsals to be more effective.

Another challenge was sustaining a steady tempo. Students had difficulty starting out a piece as well as having mid-song tempo issues during transitions or changes in dynamics. There was often an acceleration during the high energy sections and unintentional deceleration during the slower sections. The instructor's response was to design a rehearsal where practicing with a metronome was followed by taking the metronome away so that the students pulsed with the metronome. Other listening to the rhythms of the drummer and bassist was also encouraged. Students practiced complete performances with better tempo accuracy and consistency over time.

Difficulty recalling song structures was another issue students faced. Alignment issues often occurred when moving from one section of a song to another. The solution the vocalist presented was a pattern of finger cues. One finger indicated going back to the verse, a two-finger cue was moving to the chorus, and a three-

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shaped cue with the thumb and index finger signalled the ending, or coda. This song sectioning was particularly useful in the performance of Silent Night, where the cue to the last section was the closing phrase "sleep in heavenly peace" repeated three times. With time, students became more and more accurate to the section locations of the song in the rehearsals.

Dynamic control and ensemble blending were other issues. In early rehearsals, there were instances of overpowering guitar and drum parts, while the keyboard and vocals were too quiet. Using distance from the group, the instructor guided students to adjust their dynamics, contour their playing, and make room for the other parts of the music. These primary changes allowed a more balanced ensemble to form, where every part of the instruments was able to perform their role.

The interpersonal dynamics, specifically communicative dynamics, and responsiveness needed some work as well. Some students were a bit delayed in adapting to sudden shifts in the group or the actions of the improvisation. To work on this, the simulations of the improvisational tasks were conducted in real-time during rehearsals. Students were conditioned to give and maintain eye contact, listen, and react to silver or musical prompts, and this resulted in a higher level of responsiveness and fine-tuning of the group playing.

In relation to some other parameters also, students found some challenges concerning their understanding of harmony. Some students were having a difficult time either integrating the use of extended chords or were having challenges executing seamless transitions of or within the smooth functions of a harmony. This was met by the instructor in the initial rehearsals by deliberately limiting the harmonic functions of a chord and then over time, bringing in the more diverse variations of chords. More students were able to assimilate these concepts of movement within harmony more effectively through demonstrations on voicings and through teachings of sequential and contextual use of arpeggiation in a movement of a musical voicing.

Vocal development posed some challenges of its own. The vocalists were more likely to show some evidence of pitch instability, were a bit hesitant in their improvisational actions, and were sometimes a bit untimely in their entering of a sample section either a bit too early or too late. To attend to these challenges, the use of designated breathing exercises was used to work on pitch-centered practices, phrase repetitions were guided, and training was incorporated to coordinate the entry points with some harmony supporting instruments, like a guitar or keyboard. With these changes, vocal performers were more likely to show evidence of improved pitch, more confident delivery, and more consistent timing.

An additional significant factor was time management. Each rehearsal was two hours and included time for individual coaching, sectional rehearsal, arrangement building, integration with the entire band, and time for assessment and reflection. Of necessity, not all objectives set for a given rehearsal could be addressed. The instructor responded by establishing priorities for each week and, while doing so, asking the students to rehearse on their own, unmonitored, between the scheduled rehearsal times. This was a strategy to help the students continue to progress with their music, even given the time constraints. This continued progress was not possible without the independent practice outlined by the

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instructor. Overall, the instructor was able to clearly outline goals and continue to make progress with the students, even given the outlined constraints. Ultimately, the progress made was a direct result of the outlined progress made by the instructor. Overall, the progress made was a combination of the outlined goals by the instructor and the practice time available to the students. Ultimately, challenges set forth during the rehearsal time allowed for focused learning changes that allowed for individual continued advancement of the students. These challenges allowed for advancement for all students. These advancements included improvement of technical execution, improvement of playing with the group, and the ability to continue playing in a seamless manner even during difficult times.

3.2 Discussion

The results indicate that learning to play in a band at GJKI Bandung Raya involves the interplay of the three components of technical ability, musical communication, and the dynamics of the ensemble, which supported findings of past studies which stated that learning music in small group settings involves learning coordination, interaction, and collaboration (Tahirbegi, 2023; Wood et al., 2022). In this case, the church setting can be seen as a contributory and active learning environment, perfectly in line with the ideas of community music education (Ramaputra & Susetyo, 2025; Timonen, 2021).

In this study, the study identified learning milestones such as improvement in stable tempo, vocal cue responsiveness, clearer role delegation within the instruments, and enhanced coordination as a group, which show that students are still learning at a musical level and that the skill on the students is not the only factor, but the ability to adjust from their own individual skills through rehearsal; thus students were described as not only throttling at a musical level but also at the improvement of their technical individual skills within the ensemble and the ability to adjust as the rehearsal went on. This finding aligns with educational perspectives that regard learning as both an evolving and a process-oriented activity; in this case, musical growth occurs through iterative rehearsal, as well as adaptive and collaborative activities. The findings also support the assumption that non-verbal communication holds an important place in the collaboration of a musical ensemble (Sembiring et al., 2025).

There were several instructional changes that had to be made due to problems that arose that were related to mid-song tempo variability, dynamic imbalance, uneven harmonic shifts, pitch, and timing. More controlled musicality was developed by guiding the students through structured, metronome-based practices, rehearsing in sections, utilizing simplified harmonic materials, and assigning purposefully selected vocal exercises. The supportive role of responsive teaching and adaptive rehearsal strategies in aiding the progression of student musicians is documented in the field of music education research. These changes are in accord with ongoing musical adaptation research (Hörster & Hansen, 2024).

Milestone-based analysis in this study allows for a more systematic framework to assess musical development within church-based band learning. This is congruent with the literature that states the observable indicators within musical development are numerous and progress is often gradual, but can be tracked

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(Sembiring et al., 2025). From a teaching perspective, milestones serve as formative reference points that help illustrate the progress of learning in the contexts of group rehearsals. Thus, the study is able to respond to a gap in the literature on band learning in community contexts. This is expanding scholarship in a hitherto understudied area.

The findings can be directly applied to the development of more specific rehearsal strategies such as the implementation of cue systems, staged learning progressions, and weekly milestone-based goals. These strategies exemplify the clarity of the pedagogical principles employed, such as the clarity of learning objectives, the systematic sequence of instructional activities, and the shared visibility in collaborative music learning. These methods will allow instructors and church communities to develop more coherent and sustainable band learning practices.

As with any academic study, there are some potential limitations in the study wherein the scope of the researcher was limited to a single church with only a small participant pool on a band learning ensemble study. As a result of the limited scope of this study, there are potential limitations with how those findings could be generalized, although they are important with regard to band learning in a community. Regardless, this type of contextual emphasis sheds light on learning as it takes place in community-based band situations. This could lead to a future study which further expands the scope of the research to a variety of different community contexts with the potential to have longer periods of observatory study or observe the specific dynamics of improvisation and communication among members during band rehearsal periods.

In practical terms, the findings of this study indicate that learning in band formations at GJKI Bandung Raya is achieved through the development of specific technical skills and musical communication in a manner that is adaptive to the obstacles and challenges faced on a practice-to-practice basis. This affirms educational viewpoints that conceptualize learning music as an iterative cycle influenced by engagement, collaboration, and specific situational challenges. The band learning structure on a phased or milestones approach learning is one way to highlight the advancement in the various challenges encountered and will have a positive impact on small group music learning in community contexts.

4. CONCLUSION

The study's findings suggest that students' musical development at GJKI Bandung Raya occurs alongside improvements in technical skills and adaptive communication and collaboration during rehearsals. Students' learning in bands was accompanied by stable tempo, controlled dynamics, cue response, and awareness of harmony and coordination. Imbalances in dynamics and structure, uneven voice, and other challenges stimulated adaptive changes to improve performance preparedness. These findings indicate that a milestone-based approach can empirically support the design of church band music learning curricula by framing learning objectives on the continuum of technical-musical-collaborative competencies, rather than purely on performance. This may result in more focused, deliberate, and lasting learning outcomes in church band contexts. This work may be extended to larger music communities, church and

community band contexts, and cross cultural and temporal studies to examine the application of milestone-based learning frameworks in varied musical and cultural contexts.

AUTHOR CONTRIBUTION

Piter Sembiring as author, contributed to conceptualization, investigation, writing original draft, and writing review and editing; Clarisa Jesika Korina Tiurmauli Hutapea as co author, contributed to writing review and editing; Marsel Ridky Maulana and Lee Ji Heon as co author, serving as technical support and contributing to visualization.

ACKNOWLEDGMENTS

The authors extend their sincere appreciation to all individuals who contributed to this study, especially the leadership and members of GJKI Bandung Raya, whose support and cooperation were essential to the completion of this research.

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